

SERVICE MANUAL

AM/FM STEREO TUNER

SANSUI T-7/5



• SPECIFICATIONS

FM Section

Tuning range	88 to 108 MHz
Usable sensitivity	
Mono (HF)	10.5 dBf (1.8 μ V·T100)
DIN	0.9 μ V
50 dB quieting sensitivity	
Mono	17.0 dBf
Stereo	17.0 dBf
Signal to noise ratio at 65 dBf	
Mono	75 dB
Stereo	72 dB
Distortion at 65 dBf	
Mono	less than 0.1 % at 1,000 Hz
Stereo	less than 0.15 % at 1,000 Hz
Alternate channel selectivity (at 400 kHz)	
	60 dB
Stereo separation	40 dB at 1,000 Hz
Frequency response	30 to 15,000 Hz +1.0 dB, -1.5 dB
Antenna input impedance	
	300 ohms balanced 75 ohms unbalanced

AM Section

Tuning range	530 to 1,600 kHz
Usable sensitivity (Bar antenna)	50 dB/m (300 μ V/m)
Signal to noise ratio	48 dB
Image response ratio	45 dB at 1,000 Hz

Others

Output voltage and impedance	550 mV/2.2 kilohms
Power requirements	120, 220 ~ 240 V 50/60 Hz
For U.S.A. and Canada	120 V (60 Hz)
Power consumption	13 W <T-7> 10 W <T-5>
Dimensions	430 mm (16-15/16") W 87 mm (3-7/16") H 260 mm (10-1/4") D
Weight	3.4 kg (7.5 lbs) net <T-7> 4.0 kg (8.8 lbs) packed <T-7> 3.2 kg (7.1 lbs) net <T-5> 3.8 kg (8.4 lbs) packed <T-5>

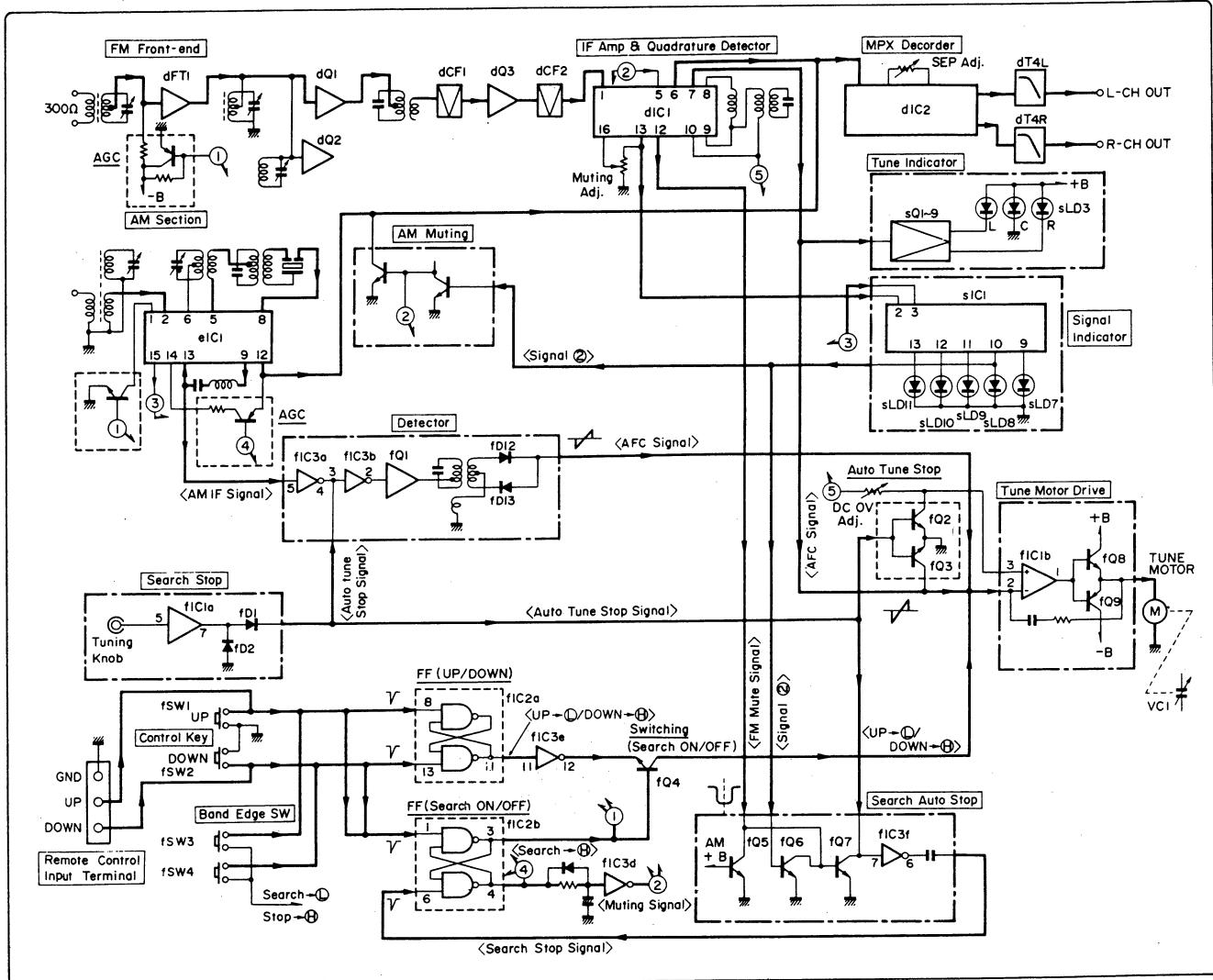
* Design and specifications subject to changes without notice for improvements.

Sansui

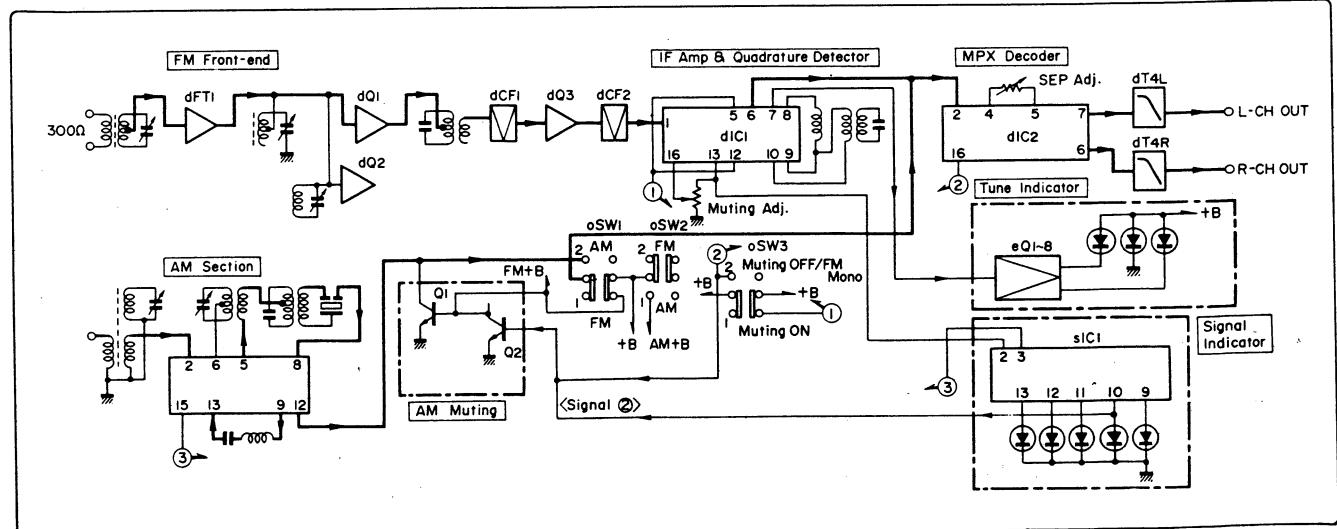
SANSUI ELECTRIC CO., LTD.

1. BLOCK DIAGRAM

1-1. T-7



1-2. T-5



2. OPERATIONS OF MOTOR DRIVE SERVO LOCK SYSTEM

(T-7 See Block Diagram)

The tuner T-7 adopts a motor drive servo lock system. Therefore, it is possible to perform a stable tuning operation based on automatic follow-up control, even when the tuned frequency fluctuates for some reason or other.

The operations of the automatic search tuning by the motor drive servo lock system will be described below simply.

◊ Automatic search operation

When depressing once the up-search key fsw 1 and down-search key fsw 2, the servo motor begins to rotate and therefore the dial tuning mechanism operates to move the variable tuning condenser.

◊ Automatic search stop operation

When the tuner is set to a desired broadcasting station, the search circuit changes to a cut-off state by the IF signal and therefore the servo motor stops rotating, so that the operation of the dial tuning mechanism stops temporarily.

◊ Servo lock operation

When the tuner has been set to a desired broadcasting station, the servo motor actuates the dial tuning mechanism so that the optimum tuning point can be obtained by using the AFC voltage generated by detecting the IF signal.

2-1. Automatic search tuning operation in FM receiving

- When depressing once the up-search key fsw1, a minus trigger pulse signal is inputted to the terminal No. 13 of the flip-flop circuit (up/down) fIC2a.

Accordingly, the terminal No. 11 of the flip-flop circuit fIC2a changes to H level in potential. After having been inverted through the inverter fIC3 to L level in potential, the pulse signal is applied to the level comparator fIC1b through the transistor fQ4.

(Since a minus trigger pulse signal is also applied to the flip-flop circuit (search on/off) fIC2b, the terminal No. 3 of the flip-flop fIC2b changes to H level in potential to turn on the transistor fQ4.)

As a result, the output terminal No. 1 of the level comparator fIC1b changes to a plus voltage.

Therefore, a plus voltage +B is supplied to the servo motor to rotate it counterclockwise, so that the variable tuning condenser is rotated.

- When the tuner is set to a desired broadcasting station by the operation of the dial tuning mechanism by the servo motor, the FM muting signal from the terminal No. 12 of the IF amplifier/quadrature detector fIC1 changes from H level to L level in potential.

In addition, the signal 2 from the terminal No. 10 of the signal indicator driver sIC1, changes to H level in potential.

When the above-mentioned FM muting signal and signal 2 are inputted to the search stop section made up of the transistors fQ5, fQ6, fQ7 and the inverter fIC3f, the transistor fQ7 is turned off, and the terminal No. 6 of the inverter fIC3f changes from H level to L level in potential.

As a result, a minus trigger pulse is inputted to the terminal No. 6 of the flip-flop circuit (search on/off) fIC2b, and therefore the terminal No. 3 of the flip-flop circuit fIC2b changes to L level in potential to turn off the transistor fQ4.

Accordingly, no servo motor control voltage is inputted from the flip-flop circuit (up/down) fIC2a to the level comparator fIC1b, so that the search operation of the dial tuning mechanism is stopped.

- After the tuner has been set to a desired broadcasting station, the AFC voltage from the terminal No. 7 of the IF amplifier/quadrature detector fIC1 is inputted to the level comparator fIC1b.

This AFC voltage becomes higher than the reference AFC voltage when the tuner is set to a frequency higher than a desired tuning point, and lower than the reference AFC voltage when set to a frequency lower than a desired tuning point. Therefore, the relationship between AFC voltage and received frequency has characteristics shown by a S-curve graphical representation. Whenever the tuner is set to a frequency apart from a desired tuning point, a plus voltage +B or a minus voltage -B is necessarily applied to the servo motor to rotate it clockwise or counterclockwise.

When the tuner is set correctly to the optimum tuning point, since the AFC voltage coincides with the reference voltage, the voltage between the two input terminals of the level comparator fIC1b becomes zero and therefore the servo motor stops rotating.

2-2. Automatic search tuning operation in AM receiving

Almost the same automatic search tuning operation is carried out in AM receiving or in FM receiving. In AM receiving, however, the search stop operation is carried out by using only the signal 2.

After the tuner has been set to a desired AM broadcasting station, the IF signal from the terminal No. 9 of the AM-IF amplifier eIC1 is FM-detected by the detector made up of the transistor fQ1, transformer coils FT1 and FT2 and diodes fD12 and fD13 and next inputted to the level comparator fIC1b.

This AFC voltage actuates the servo motor for dial tuning operation, so that the received frequency can be set to the optimum tuning point in the same way as in FM receiving.

2-3. Search operation by touch sensor and stop of servo lock operation

When touching the tuning knob with the hand, hum noise is produced from the knob. By utilizing this hum noise, the search operation and the servo lock operation can be stopped. After having been amplified by the amplifier fIC1a, the hum noise is detected by the detectors fD1 and fD2 into a H-level voltage. This H-level signal is passed through the diode fD14 and applied to the terminal No. 7 of the automatic search stop circuit fIC3f to stop the search operation. Also, since this H-level signal is applied to the bases of the transistors fQ2 and fQ3 to turn them on, no AFC signal is inputted to the level comparator fIC1b, and therefore the servo lock operation stops.

(In the case of AM receiving, this H-level signal changes the AM-IF waveform shaper fIC3b into a cut-off state to prevent the AFC voltage from being generated.)

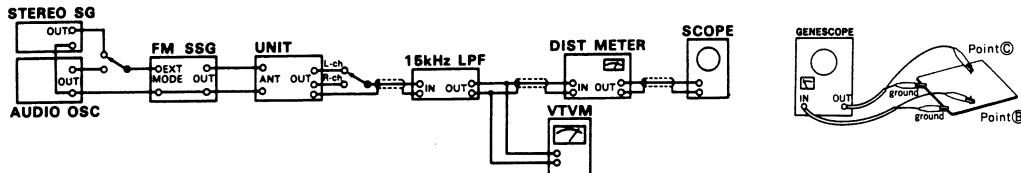
Therefore, the automatic tuning operation changes to the manual tuning operation whenever the hand is brought into contact with the tuning knob.

3. ADJUSTMENTS

3-1. FM Adjustment (See Top View on Page 10 & 11)

(1) FM IF, RF Adjustment and Dial Calibration

Note: 1. Selector FM
2. AM/FM muting switch OFF



STEP	SUBJECT	FEED SIGNAL		MEASURE OUTPUT	ADJUST	ADJUST FOR	REMARKS
		FROM	TO				
1.	IF Coil Adj.	98MHz ANT Input 20dBf (14.8dB), 1kHz (100% MOD.), FM SSG	ANT terminal 300Ω	Between Point A & Earth DC Volt Meter	dT1	Max. DC Volt	
2.	Discriminator Coil Adj. In case of using Genescope	1 No Input	—	Between dTP1 & dTP2 DC Volt Meter	dT2	DC 0V ±0.1V	
	Discriminator Coil Adj. In case of using Dist meter	2 Output 80dB, Genescope	Point C	Between Point B & Earth	dT3, dT2 dT1	Steep linearity of S curve, Make symmetrical S curve.	
3.	88MHz Dial Calibration	88MHz ANT Input 65dBf (59.8dB), 1kHz (100% MOD.), FM SSG	Same as above	OUTPUT L-CH or R-CH, VTVM & SCOPE	dL3	Max. Output	• Repeat procedures as stated in 1 and 2. • Since the dT1 has already adjusted, perform only a fine adjustment in this procedure.
4.	108MHz Dial Calibration	108MHz ANT Input 65dBf (59.8dB), 1kHz (100% MOD.), FM SSG	Same as above	Same as above	dTC3	Same as above	
5.	88MHz RF Adj.	88MHz ANT Input Minimum value with sine wave 1000Hz (100% MOD.), FM SSG	Same as above	Same as above	dL1, dL2	Same as above	
6.	108MHz RF Adj.	108MHz ANT Input Minimum value with sine wave, 1000Hz (100% MOD.), FM SSG	Same as above	Same as above	dTC1, dTC2	Same as above	
7.	FM DC 0V Adj. (T-7)	1 98MHz ANT Input 65dBf (59.8dB), 1kHz (100% MOD.), FM SSG	Same as above	Between dTP1 & dTP2 DC Volt Meter	Tuning Knob	DC 0V (Just Tune)	• Remove the lead wires from the motor connected to the connector terminals 10 and 11. • Short between the point F (FD1) and the ground. • AM/FM muting switch . . . ON.
		2 Same as above	Same as above	Between TP5 & Earth DC Volt Meter	fVR1	DC 0V	

* Check that the tuning operation is achieved correctly and the three indicator lamps stay on, by turning on or off the AM/FM muting switch.

Abbreviations

Equipment	Others
AM FM Generator Oscilloscope	Genescope
AM Standard Signal Generator	Antenna
FM Standard Signal Generator	Modulation
FM Stereo Generator	Total Harmonic Distortion
Oscilloscope	ANT.
Audio Oscillator	MOD.
Distortion Meter	T.H.D.
Scope	
Audio Osc.	
Dist. Meter	

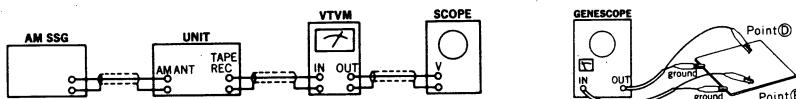
(2) FM STEREO Adjustment

Note: 1. Selector FM
2. AM/FM muting switch ON

STEP	SUBJECT	FEED SIGNAL		MEASURE OUTPUT	ADJUST	ADJUST FOR	REMARKS
		FROM	TO				
1.	PLL VCO Adj.	98MHz ANT Input 65dBf (59.8dB), FM SSG, Pilot 19kHz (9% MOD.), R or L MODE 1kHz + Pilot (100% MOD.), STEREO SG	ANT terminal 300Ω	Stereo indicator	dVR3 (T-5) dVR2 (T-7)	Light indicator	Adjust the VR within center of lighting level
	PLL VCO Adj. In case of using Freq.	98MHz ANT Input 65dBf (59.8dB), FM SSG, No MOD.	Same as above	Between TP3 & Earth Freq. counter	dVR3 (T-5) dVR2 (T-7)	19kHz ±50Hz	
2.	Separation Adj.	98MHz ANT Input 65dBf (59.8dB), FM SSG, Pilot 19kHz (9% MOD.), L MODE 1kHz + Pilot (100% MOD.), STEREO SG.	Same as above	OUTPUT L-CH VTVM & SCOPE	—	Read this indication on VTVM	Confirm R → L-CH
				OUTPUT R-CH VTVM & SCOPE	dVR2 (T-5) dVR3 (T-7)	—40dB from the indication above.	
3.	Muting level Adj.	98MHz ANT Input 30dBf (24.8dB), FM SSG, Pilot 19kHz (9% MOD.), L or R MODE 1kHz + Pilot (100% MOD.), STEREO SG.	Same as above	Stereo indicator or OUTPUT L-CH or R-CH VTVM & SCOPE	dVR1	Stereo indicator turns ON or Output Signal comes out	

3-2. AM Adjustment (See Top View on Page 10 & 11)

Note: 1. Selector AM
2. AM, FM muting switch OFF



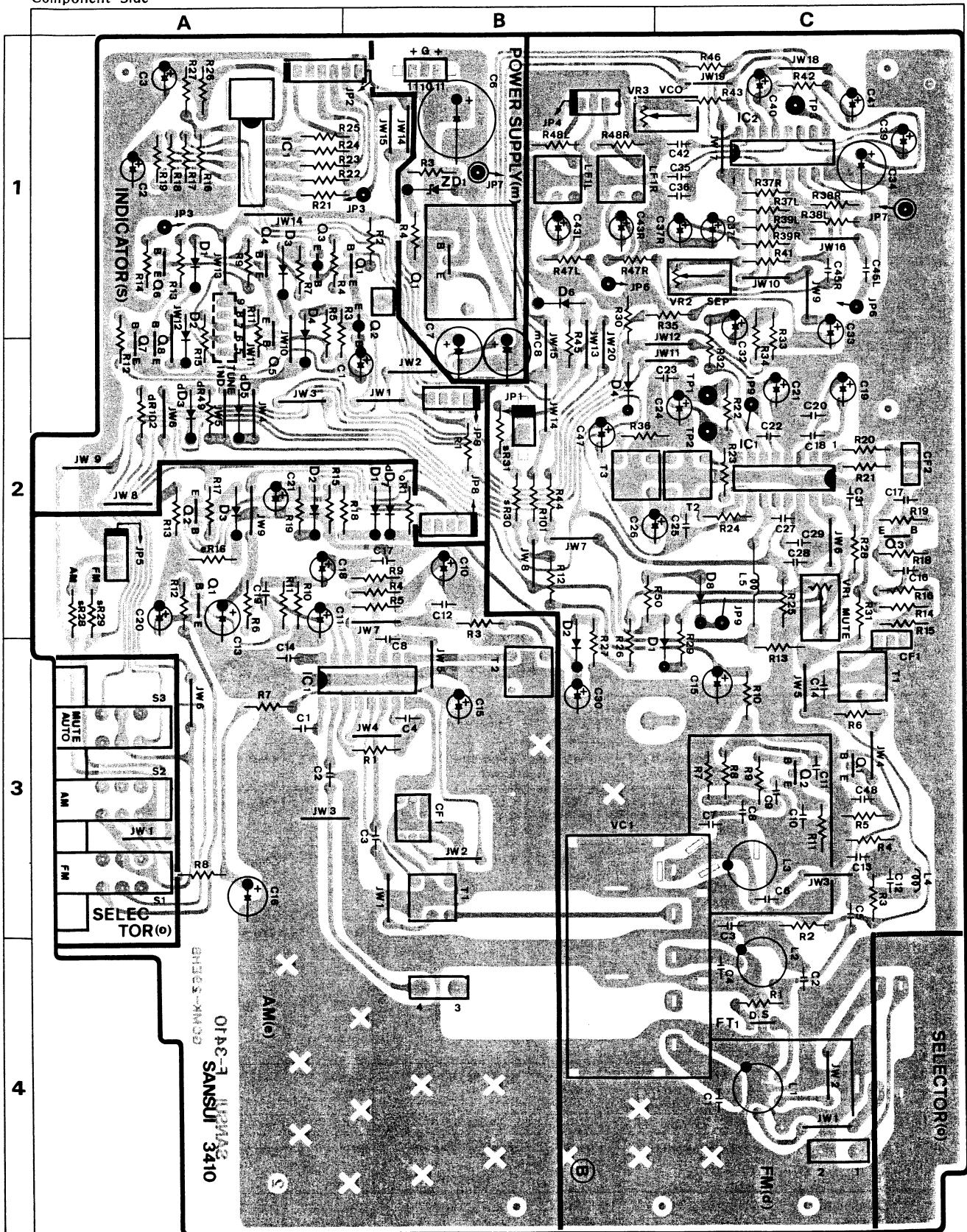
STEP	SUBJECT	FEED SIGNAL		MEASURE OUTPUT	ADJUST	ADJUST FOR	REMARKS
		FROM	TO				
1.	IF Coil Adj.	Output 60dB, Genescope	Point D	Between Point E & Earth	eCF1, eT2	Max. Waveform	
2.	600kHz Dial Calibration	600kHz ANT Input 60dB, 400Hz (30% MOD.), AM SSG	ANT terminal	OUTPUT L-CH or R-CH VTVM & SCOPE	eT1	Max. Output	• Repeat procedures as stated in 2 and 3.
3.	1400kHz Dial Calibration	1400kHz ANT Input 60dB, 400Hz (30% MOD.), AM SSG	Same as above	Same as above	eTC2	Same as above	
4.	600kHz RF Adj.	600kHz ANT Input 30dB, 400 Hz (30% MOD.), AM SSG	Same as above	Same as above	Bar Antenna (eL1)	Same as above	
5.	1400kHz RF Adj.	1400kHz ANT Input 30dB, 400Hz (30% MOD.), AM SSG	Same as above	Same as above	eTC1	Same as above	
6.	AM DC 0V Adj. (T-7)	1 1000kHz, ANT Input 60dB, 400Hz (30% MOD.), AM SSG	Same as above	Same as above	Tuning Knob	Same as above	<ul style="list-style-type: none"> • Remove the lead wires from the motor connected to the connector terminals 10 and 11. • Short between the point F (fD1) and the ground. • Repeat procedures as stated in 6 and 7. • AM/FM muting switch . . . ON
		2 Same as above	Same as above	Between TP4 & Earth DC Volt Meter	fT2	DC 0V	
7.	Discriminator Coil Adj. (T-7)	1 Same as above	Same as above	Same as above	Tuning Knob	Max. DC Volt	<ul style="list-style-type: none"> • AM/FM muting switch . . . ON
		2 Same as above	Same as above	Same as above	fT1	Max. DC Volt (about DC 0.4V)	

4. PARTS LOCATION & PARTS LIST

4-1. F-3410 AM, FM, RF, IF Circuit Board (Stock No. 00626001 = T-5)

• Since some of capacitors and resistors are omitted from parts lists in this Service Manual, refer to the Common Parts List for capacitors & resistors which was appended previously to each Sansui Manual.

Component Side



Parts List

Parts No.	Stock No.	Description
•Transistor		
dQ1	03063401, 2	2SC1674 L, K
dQ2	03069500, 1	2SC668 C, D
dQ3	03069500, 1	2SC668 C, D
•FET		
dFT1	03703700, 1	2SK120 1, 2
•IC		
dic1	07191200	LA1231N
dic2	03609900	μPC1161C
•Diode		
dD1	03117600	1S2473D
dD2	03117600	1S2473D
dD3	03117600	1S2473D
dD4	03117600	1S2473D
dD5	03117600	1S2473D
dD6	03117600	1S2473D
dD7	03117600	1S2473D
dD8	03117600	1S2473D
dVC1	12203000	Variable Capacitor
dCF1	07102210	Ceramic Filter
dCF2	07102210	Ceramic Filter
dLF1	07196400	Low Pass Filter
dL1	42007200	FM RF Coil
dL2	42103400	FM RF Coil
dL3	42204000	FM RF Coil
dL4	49002800	Inductor 1μH
dL5	42904600	Peaking Coil 3.5μH
dT1	42359300	FM IF Coil
dT2	42362700	FM IF Coil
dT3	42362800	FM IF Coil
dVR1	07241700	Semi Variable Resistor 200 kΩ (B)
dVR2	07241700	Semi Variable Resistor 200 kΩ (B)
dVR3	07218000	Semi Variable Resistor 6.8 kΩ (B)
•Transistor		
eQ1	03059501, 2	2SC945 Q, P
	07194800, 1	2SC1815 Y, GR
	03068301, 2	2SC2320 E, F
eQ2	03059501, 2	2SC945 Q, P
	07194800	2SC1815 Y
	03068301, 2	2SC2320 E, F
•IC		
eIC1	03608000	LA1240
	03603900	HA1197

Parts No.	Stock No.	Description
•Diode		
eD1	03117600	1S2473D
eD2	03117600	1S2473D
eD3	03117600	1S2473D
eCF1	09106100	Ceramic Filter
eL1	07258000	AM Bar Antenna
eT1	07257300	AM RF Coil
eT2	42306200	AM IF Coil
•Transistor		
mQ1	03083902, 3	2SD313AL E, F
•Zener Diode		
mDZ1	03179000	RD13E B
	03179100	RD13E C
oS1	07264301 22902600	Push Switch 4P Terminal Board, antenna
•Transistor		
sQ1	03059501, 2	2SC945 Q, P
	07194800, 1	2SC1815 Y, GR
	03068301, 2	2SC2320 E, F
sQ2	07197001, 2	2SA733A Q, P
	07194700, 1	2SA1015 Y, GR
	03012700, 1	2SA999 E, F
sQ3	07197001, 2	2SA733A Q, P
	07194700, 1	2SA1015 Y, GR
	03012700, 1	2SA999 E, F
sQ4	03059501, 2	2SC945 Q, P
	07194800, 1	2SC1815 Y, GR
	03068301, 2	2SC2320 E, F
sQ5	03059501, 2	2SC945 Q, P
	07194800, 1	2SC1815 Y, GR
	03068301, 2	2SC2320 E, F
sQ6	03059501, 2	2SC945 Q, P
	07194800, 1	2SC1815 Y, GR
	03068301, 2	2SC2320 E, F
sQ7	03059501, 2	2SC945 Q, P
	07194800, 1	2SC1815 Y, GR
	03068301, 2	2SC2320 E, F
sQ8	03059501, 2	2SC945 Q, P
	07194800, 1	2SC1815 Y, GR
	03068301, 2	2SC2320 E, F
•IC		
sIC1	03611600	LB1416
sD1	03117600	1S2473D
sD2	03117600	1S2473D
sD3	03117600	1S2473D
sD4	03117600	1S2473D

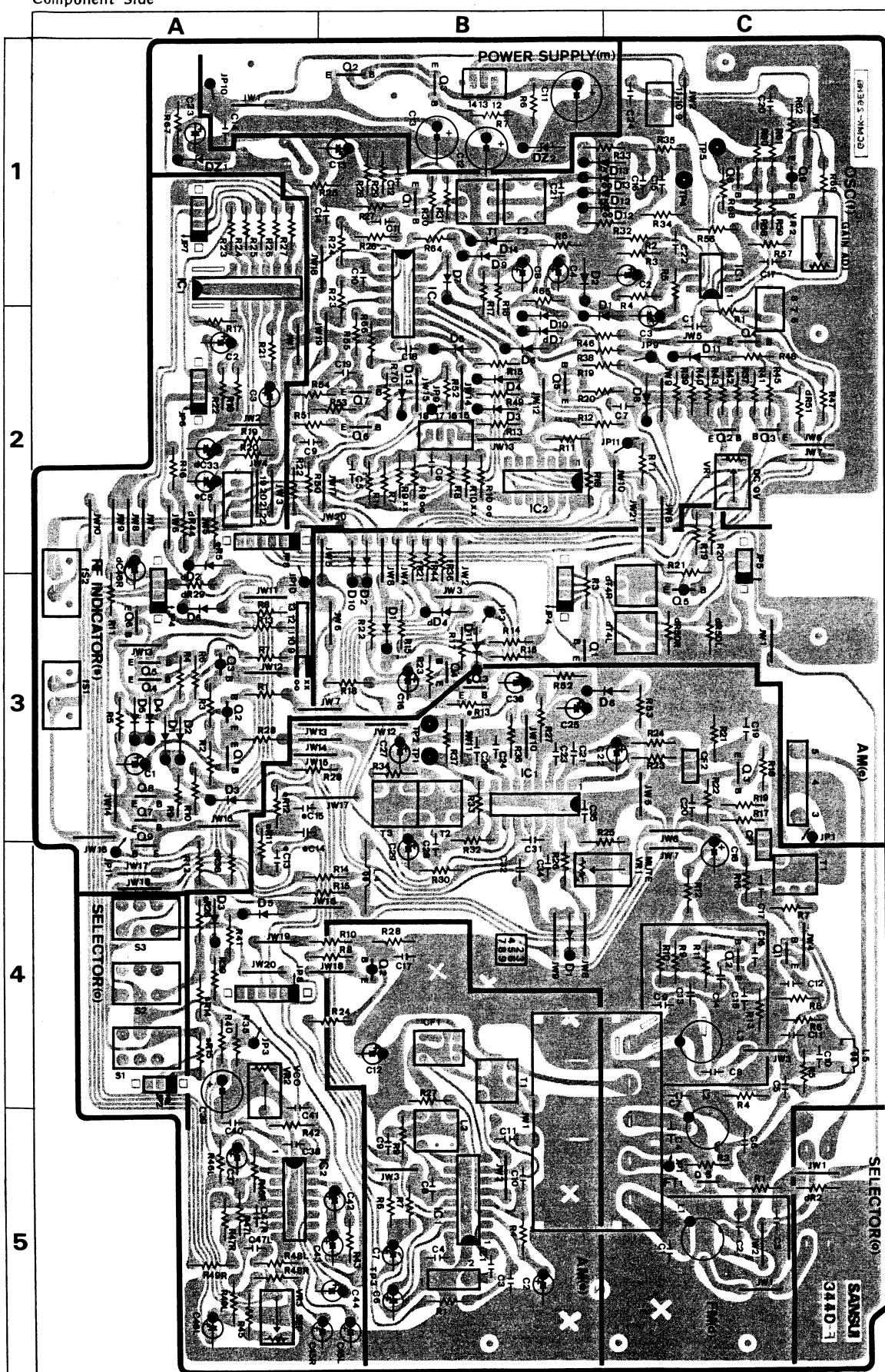
• Abbreviations

C.R. . .	Carbon Resistor
S.R. . .	Solid Resistor
Cs.R. . .	Cement Resistor
M.R. . .	Metal Film Resistor
F.R. . .	Fusing Resistor
N.I.R. . .	Non-Inflammable Resistor
C.C. . .	Ceramic Capacitor
C.T. . .	Ceramic Capacitor, Temperature Compensation
E.C. . .	Electrolytic Capacitor

E.L. . .	Low Leak Electrolytic Capacitor
E.B. . .	Bi-Polar Electrolytic Capacitor
E.BL. . .	Low Leak Bi-Polar Electrolytic Capacitor
Ta.C. . .	Tantalum Capacitor
F.C. . .	Film Capacitor
M.P. . .	Metalized Paper Capacitor
P.C. . .	Polystyrene Capacitor
G.C. . .	Gimmie Capacitor

4-2. F-3440 AM, FM, RF, IF Circuit Board (Stock No. 00625301 = T-7)

Component Side

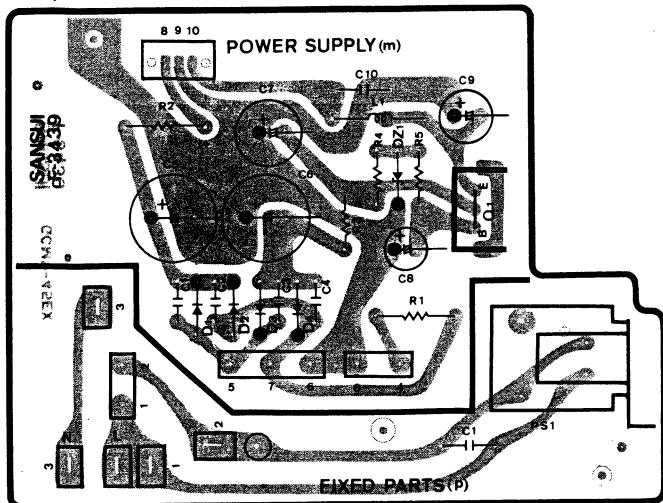


Parts List

Parts No.	Stock No.	Description	Parts No.	Stock No.	Description	Parts No.	Stock No.	Description
●Transistor			eD11	03117600	1S2473D	fVR1	07241500	Semi Variable Resistor 50 kΩ (B)
dQ1	03063401, 2	2SC1674 L, K	eCF1	09106500	Ceramic Filter 455 kHz	fS1	07209300	Push Switch
dQ2	03069500, 1	2SC668 C, D				fS2	07209300	Push Switch
dQ3	03069500, 1	2SC668 C, D	eL1	07258000	AM Bar Antenna	●Transistor		
●FET			eT1	07257300	AM RF Coil	mQ2	03083902, 3	2SD313AL E, F
dFT1	03703700, 1	2SK120 1, 2	eL2	42306200	AM IF Coil	mQ3	03059501, 2	2SC945 Q, P
●IC			●Transistor			07194800, 1	2SC1815 Y, GR	
dIC1	07191200	LA1231N	fQ1	03063400, 1	2SC1674 M, L	●Zener Diode		
dIC2	03609900	μPC1161C		03069500, 1	2SC668 C, D	mDZ2	07180700	RD15E B
●Diode				03057900, 1	2SC930 C, D	oS1	07264301	Push Switch
dD1	03117600	1S2473D	fQ2	03059501, 2	2SC945 Q, P	●Transistor		
dD2	03117600	1S2473D		07194800, 1	2SC1815 Y, GR	sQ1	03059501, 2	2SC945 Q, P
dD3	03117600	1S2473D	fQ3	03068301, 2	2SC2320 E, F	sQ2	07197001, 2	2SA733A Q, P
dD4	03117600	1S2473D		03059501, 2	2SC945 Q, P	sQ3	07197001, 2	2SA733A Q, P
dD5	03117600	1S2473D	fQ4	07194800, 1	2SC1815 Y, GR		07194700, 1	2SA1015 Y, GR
dD6	03117600	1S2473D		03068301, 2	2SC2320 E, F	sQ4	03032700, 1	2SA999 E, F
dD7	03117600	1S2473D	fQ5	03059501, 2	2SC945 Q, P		03059501, 2	2SC945 Q, P
dVC1	12203000	Variable Capacitor		07194800, 1	2SC1815 Y, GR	oS1	07264301	Push Switch
dCF1	07102210	Ceramic Filter	fQ6	03068301, 2	2SC2320 E, F	●Transistor		
dCF2	07102210	Ceramic Filter		03059501, 2	2SC945 Q, P	sQ1	03059501, 2	2SC945 Q, P
dT4	07196400	Low Pass Filter	fQ7	07194800, 1	2SC1815 Y, GR	sQ2	07197001, 2	2SA733A Q, P
dL1	42007200	FM RF Coil		03068301, 2	2SC2320 E, F	sQ3	07197001, 2	2SA733A Q, P
dL2	42103400	FM RF Coil	fQ8	03059501, 2	2SC945 Q, P		07194700, 1	2SA1015 Y, GR
dL3	42204000	FM RF Coil		07194800, 1	2SC1815 Y, GR	sQ4	03032700, 1	2SA999 E, F
dL4	42904600	Peaking Coil 3.5μH	fQ9	03068301, 2	2SC2320 E, F		03059501, 2	2SC945 Q, P
dL5	49002800	Inductor 1μH		03068301, 2	2SC2320 E, F	oS1	07264301	Push Switch
dT1	42359300	FM IF Coil	fQ6	03059501, 2	2SC945 Q, P	●Transistor		
dT2	42362700	FM IF Coil		07194800, 1	2SC1815 Y, GR	sQ1	03059501, 2	2SC945 Q, P
dT3	42362800	FM IF Coil	fQ7	03068301, 2	2SC2320 E, F	sQ2	07197001, 2	2SA733A Q, P
dVR1	07241300	Semi Variable Resistor 10 kΩ (B)	fQ8	03059501, 2	2SC945 Q, P	sQ3	07197001, 2	2SA733A Q, P
dVR2	07218000	Semi Variable Resistor 6.8 kΩ (B)	fQ9	07206800, 1	2SA952 M, L		07194700, 1	2SC1815 Y, GR
dVR3	07241700	Semi Variable Resistor 200 kΩ (B)		07254800, 1	2SA854 Q, R	sQ4	03068301, 2	2SC2320 E, F
●Transistor			●IC	07208900	NJM4558D		03059501, 2	2SC945 Q, P
eQ1	03059501, 2	2SC945 Q, P	fIC1	03604000	MSM4011		07194800, 1	2SC1815 Y, GR
	07194800, 1	2SC1815 Y, GR	fIC2	03604100	TC4011P		03068301, 2	2SC2320 E, F
eQ2	03068301, 2	2SC2320 E, F	fIC3	03611800	MSM4049RS	●IC		
	03006800, 1	2SA733-2 P, Q	●Diode			sIC1	03611600	LB1416
	07194700, 1	2SA1015 Y, GR	fD1	03117600	1S2473D	●Diode		
eQ3	03012700, 1	2SA999 E, F	fD2	03117600	1S2473D	sD1	03117600	1S2473D
	03059501, 2	2SC945 Q, P	fD3	03117600	1S2473D	sD2	03117600	1S2473D
	07194800, 1	2SC1815 Y, GR	fD4	03117600	1S2473D	sD3	03117600	1S2473D
eQ4	03068301, 2	2SC2320 E, F	fD5	03117600	1S2473D	sD4	03117600	1S2473D
	03059501, 2	2SC945 Q, P	fD6	03117600	1S2473D	sD5	03117600	1S2473D
	07194800, 1	2SC1815 Y, GR	fD7	03117600	1S2473D	sD6	03117600	1S2473D
eQ5	03068301, 2	2SC2320 E, F	fD8	03117600	1S2473D			
	07197001, 2	2SA733A Q, P	fD9	03117600	1S2473D			
	07194700, 1	2SA1015 Y, GR	fD10	03117600	1S2473D			
eQ5	03012700, 1	2SA999 E, F	fD11	03117600	1S2473D			
	03059501, 2	2SC945 Q, P	fD12	07225500	1N60			
	07194800, 1	2SC1815 Y, GR	fD13	07225500	1N60			
eQ5	03068301, 2	2SC2320 E, F	fD14	03117600	1S2473D			
	07197001, 2	2SA733A Q, P	fD15	03117600	1S2473D			
	07194700, 1	2SA1015 Y, GR	fD16	03401700	MV103			
eQ5	03012700, 1	2SA999 E, F	fD17	03401700	MV103			
●IC								
eIC1	03603900	HA1197	●Zener Diode					
	03608000	LA1240	fDZ1	07179700	RD9.1E B			
●Diode				07179800	RD9.1E C			
eD1	03117600	1S2473D	fT1	07250100	AM IF Coil			
eD2	03117600	1S2473D	fT2	07250200	AM IF Coil			
eD10	03117600	1S2473D						

4-3. F-3439 Power Supply Circuit Board (Stock No. 00625901 = T-7/00626401 = T-5)

Component Side



Parts List

Parts No.	Stock No.	Description
● Diode		
mD1	03117700	10E-2
mD2	03117700	10E-2
pS1	07261300	Push Switch

Parts No.	Stock No.	Description
<T-7 Only>		
● Transistor		
mQ1	03034401, 2	2SB527D, E
● Diode		
mD3	03117700	10E-2
mD4	03117700	10E-2
● Zener Diode		
mDZ1	03159800	EQA01-14R
mR1	00184300	68Ω 1W N.I.R.
mR2	00179000	10Ω 1W N.I.R.
mR3	00179000	10Ω 1W N.I.R.
mL1	42904600	Peaking Coil 3.5μH
pC1	08302100	4700 pF 125 V C.C.
<T-5 Only>		
mR1	00184300	68Ω 1W N.I.R.
mR2	00181600	27Ω 1W N.I.R.
pC1	00386100	4700 pF 150 V C.C.

- Note: The circuit board, F-3411, F-3412, F-3413, F-3414, F-3415, F-3416, F-3441 & F-3442 are not supplied as the assembled. However, the individual parts on the circuit board are provided by orders.

4-4. F-3411 Output Terminal Circuit Board (T-5)

Parts List

Parts No.	Stock No.	Description
	07249000	2P Input Terminal

4-5. F-3412 AM, FM Indicator LED Circuit Board (T-5)

Parts List

Parts No.	Stock No.	Description
	07581900	1P LED Holder
	07581600	5P LED Holder
sLD7	07243200	Light Emitting Diode GL-5HD5
sLD8	07246200	Light Emitting Diode SEL1710K

4-6. F-3413 RF Indicator Circuit Board (T-5)

Parts List

Parts No.	Stock No.	Description
	07581900	1P Led Holder
sLD1 ~ 5	07246200	Light Emitting Diode SEL1710K
sLD6	07243200	Light Emitting Diode 5HD5

4-7. F-3414 Output Terminal Circuit Board (T-7)

Parts List

Parts No.	Stock No.	Description
	07249000	2P Terminal Board

4-8. F-3415 AM/FM Indicator LED Circuit Board (T-7)

Parts List

Parts No.	Stock No.	Description
	07581900	LED Holder
sLD1	07243200	Light Emitting Diode GL-5HD5
sLD2	07246200	Light Emitting Diode SEL1710K

4-9. F-3416 RF Signal Indicator LED Circuit Board (T-7)

Parts List

Parts No.	Stock No.	Description
	07581900	LED Holder
	07581600	5P LED Holder
sLD6	07243200	Light Emitting Diode 5HD5
sLD7 ~ 10	07246200	Light Emitting Diode SEL1710K

4-10. F-3441 Tuning Switch Circuit Board <UP> (T-7)

Parts List

Parts No.	Stock No.	Description
fS3	07259300	Push Switch

4-11. F-3442 Tuning Switch Circuit Board <DOWN> (T-7)

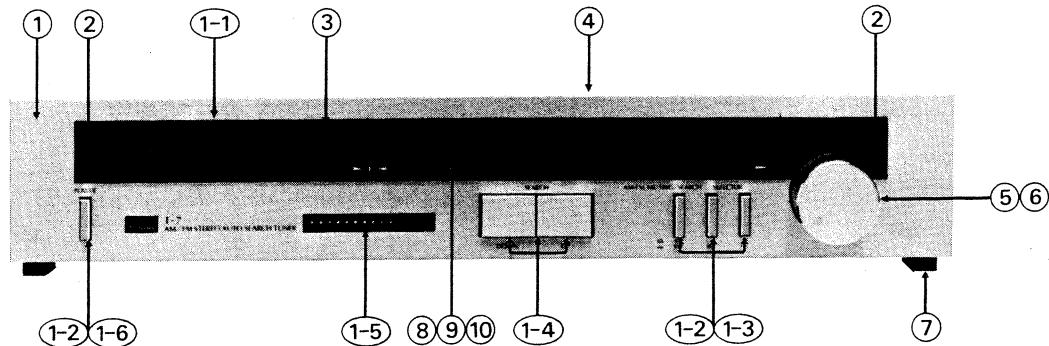
Parts List

Parts No.	Stock No.	Description
fS4	07259300	Push Switch

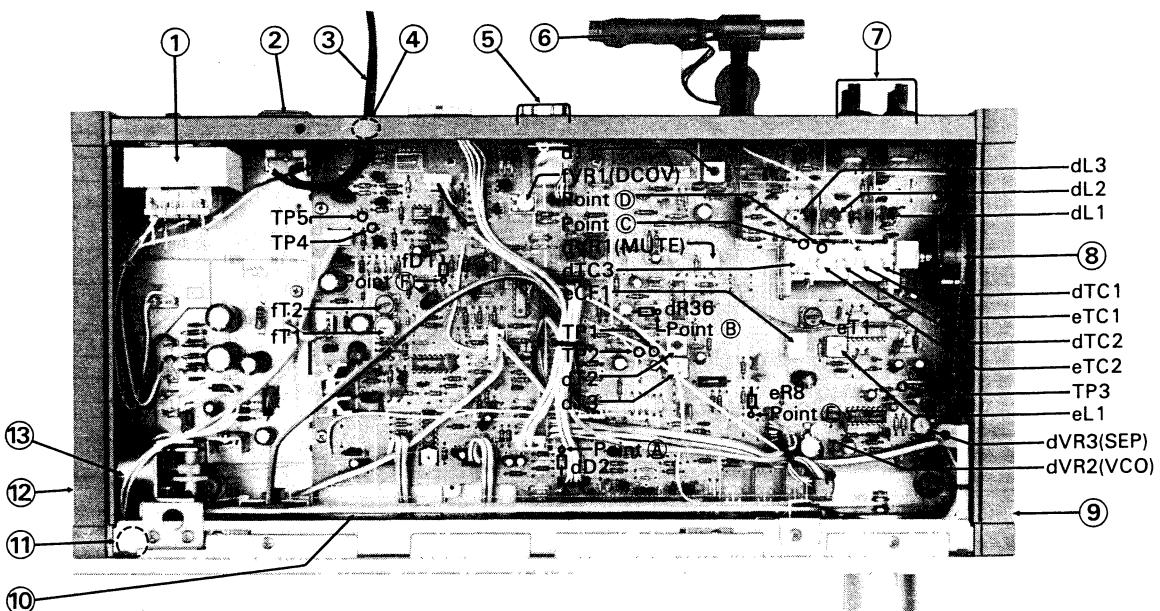
5. OTHER PARTS

5-1. T-7

A) Front View



B) Top View



Parts List <Front View>

Parts No.	Stock No.	Description
2	07679000	Dial Scale Holder
3	07703000	Dial Scale
4	07601400	Bonnet
6	07262900	Tuning Unit
7	07601200	Leg
8	07654810	Dial Pointer Holder
9	07647810	Dial Pointer Cap
10	07264700	LED Ass'y

Parts No.	Stock No.	Description
1-2	07580000	Push Knob
1-3	07581400	Push Knob Guide
1-4	07663100	Push Knob Ass'y, search
1-5	07705000	Indicator Window
1-6	07595600	Push Knob Guide
5	07738400	Knob, tuning

<Silver Model>

1	07704330	Front Panel Ass'y <XX>
	07782300	Front Panel Ass'y
1-1	07738610	Panel Window <XX>
	07781700	Panel Window
1-2	07579800	Push Knob
1-3	07581500	Push Knob Guide
1-4	07652200	Push Knob Ass'y, search
1-5	07705000	Indicator Window
1-6	07628100	Push Knob Guide
5	07738300	Knob, tuning

<Black Model>

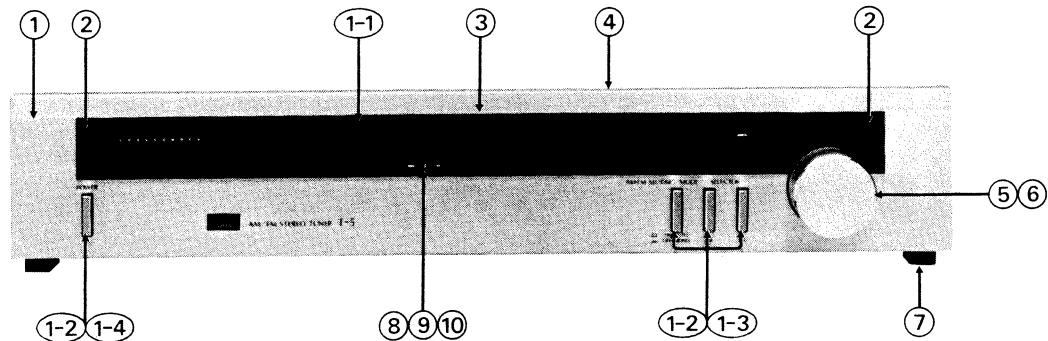
<Blank Model>		
1	07704420	Front Panel Ass'y <XX>
	07782400	Front Panel Ass'y
1-1	07691310	Panel Window <XX>
	07781800	Panel Window

Parts List <Top View>

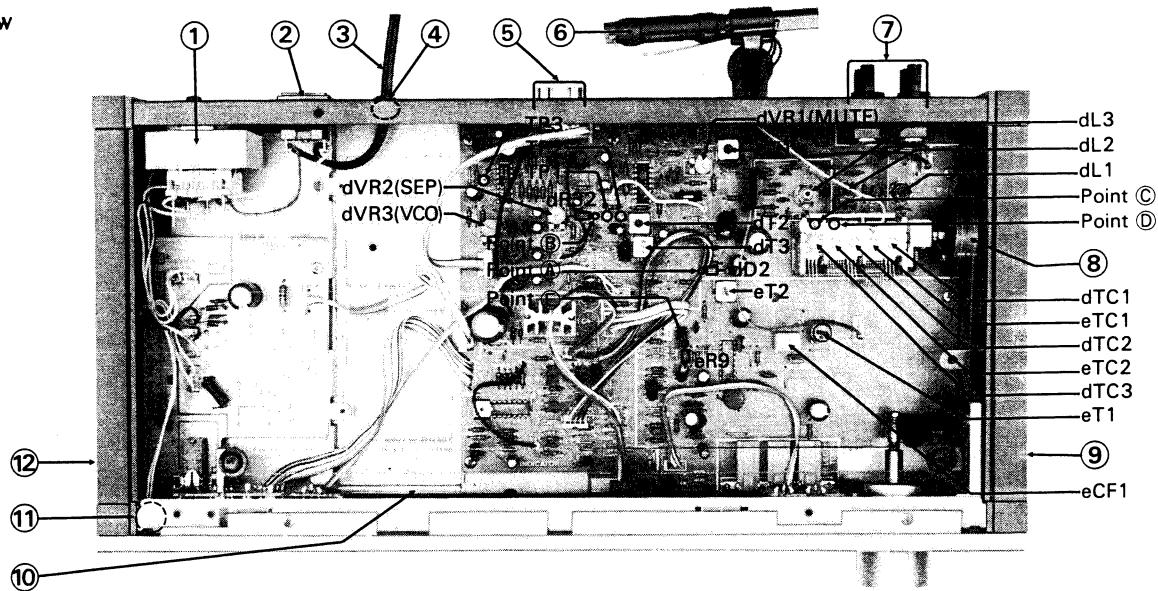
Parts No.	Stock No.	Description
1	15002701	Power Transformer
2	07189600	AC Outlet
3	38005400	Power Supply Cord
4	39106000	Strain Relief
5	07249000	2P Output Terminal Board
6	07258000	AM Bar Antenna
7	22902600	Terminal Board 4P, antenna
8	07732400	Pulley
9	07601810	Side Panel (R)
10	07257000	Belt
11	07267600	Pilot Lamp, 14V 80mA
12	07601710	Side Panel (L)
13	07234200	Motor Unit

5-2. T-5

A) Front View



B) Top View



Parts List <Front View>

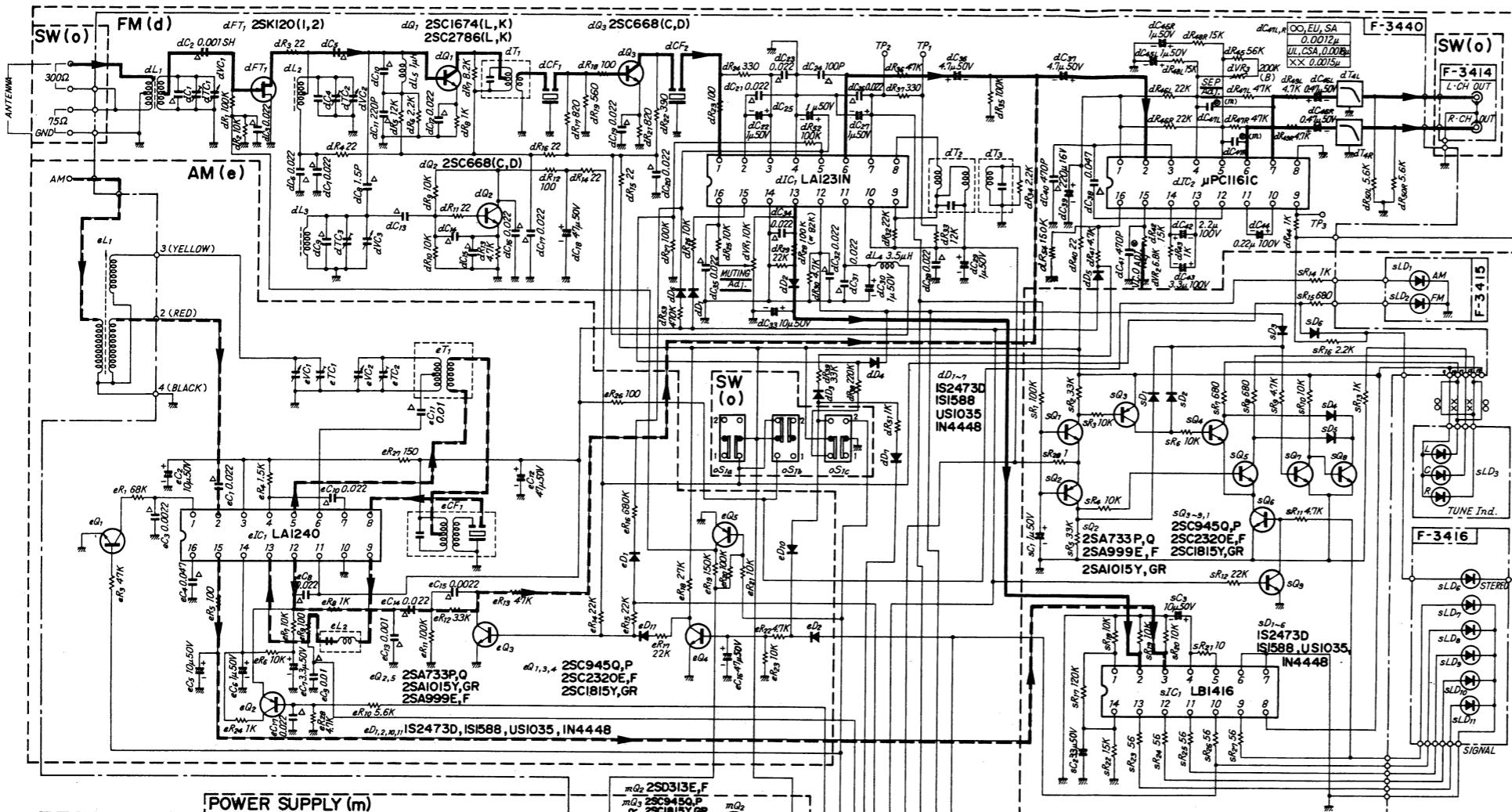
Parts No.	Stock No.	Description
2	07679000	Dial Scale Holder
3	07703300	Dial Scale
4	07601400	Bonnet
6	07263000	Tuning Unit
7	07601200	Leg
8	07654810	Dial Pointer Holder
9	07647810	Dial Pointer Cap
10	07264700	LED Ass'y
<Silver Model>		
1	07704730	Front Panel Ass'y <XX>
	07782100	Front Panel Ass'y
1-1	07738610	Panel Window <XX>
	07781700	Panel Window
1-2	07579800	Push Knob
1-3	07581500	Push Knob Guide
1-4	07628100	Push Knob Guide
5	07738100	Knob, tuning
<Black Model>		
1	07704820	Front Panel Ass'y <XX>
	07782200	Front Panel Ass'y
1-1	07691310	Panel Window <XX>
	07781800	Panel Window
1-2	07580000	Push Knob
1-3	07581400	Push Knob Guide
1-4	07595600	Push Knob Guide
5	07624500	Knob, tuning

Parts List <Top View>

Parts No.	Stock No.	Description
1	15002701	Power Transformer
2	07189600	AC Outlet
3	38005400	Power Supply Cord
4	39106000	Strain Relief
5	07249000	2P Input Terminal
6	07258000	AM Bar Antenna
7	22902600	Terminal Board 4P, antenna
8	61466630	Pulley
9	07601810	Side Panel (R)
10	07691400	Dial Pointer Guide
11	07267600	Pilot Lamp, 14V 80mA
12	07601710	Side Panel (L)

6. SCHEMATIC DIAGRAM 6-1. T-7

- La présentation et les spécifications sont susceptibles d'être modifiées sans préavis par suites d'améliorations éventuelles.
- Änderungen, die dem technischen Fortschritt dienen, bleiben vorbehalten.
- Design and specifications subject to change without notice for improvement.



規格設定				
	J	U	SA	
C ₇	15P	12P	15P	SH
C ₅	BP	9P	BP	CH
C ₄	22P	15P	15P	SH
C ₁₀	BP	-	18P	CH
C ₉	SH 15P 10P	RH 20P 10P	RH 11P 10P	
C ₁₃	SH 10P	RH 10P	TH 10P	
C ₁₄	10P	10P	10P	CH
C ₁₅	20P	20P	20P	CH

		1	2
oS_{1a}	FM	ON	OFF
oS_{1b}	AM	ON	OFF
oS_{1c}	AM, FM MUTING/SEARCH	ON	OFF
FSW_1	UP		
FSW_2	DOWN		
FSW_3	1 out SW		

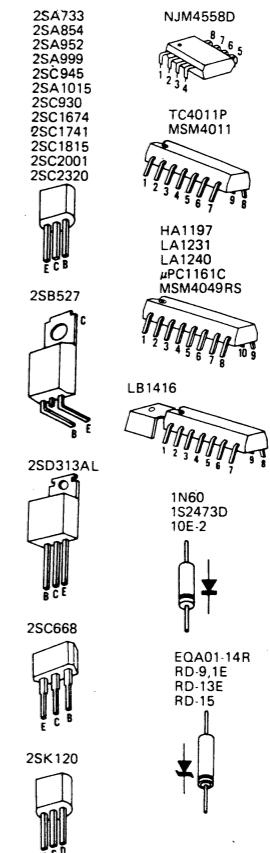
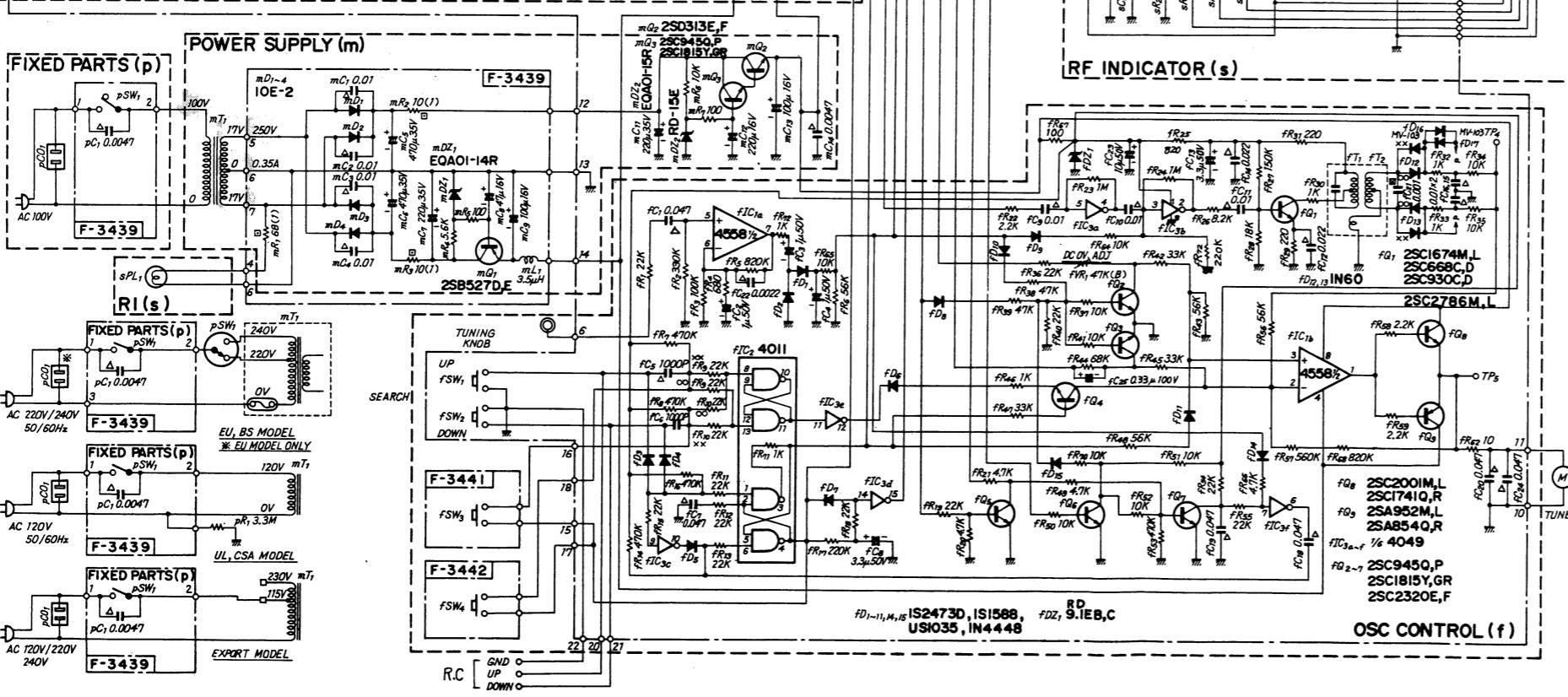
SYMBOL OF FUNCTION

- (d) FM
- (e) AM
- (f) OSC CONTROL
- (m) POWER SUPPLY
- (o) SW
- (p) FIXED PARTS
- (s) RF INDICATOR

SYMBOL OF C.R

- △ Ceramic Capacitor
- ◎ Polystyrene Capacitor
- ◎(M) Mylar
- Non-Inflammable Resistor

FM
AM



A

B

C

D

E

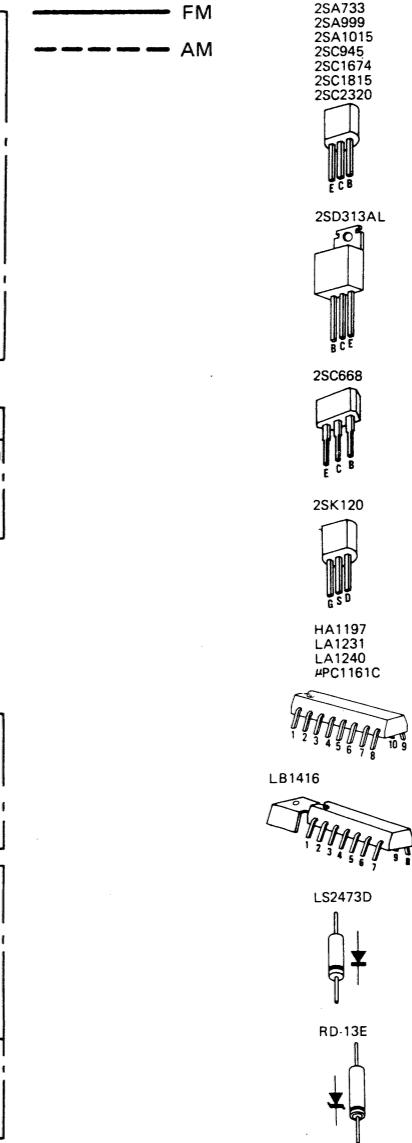
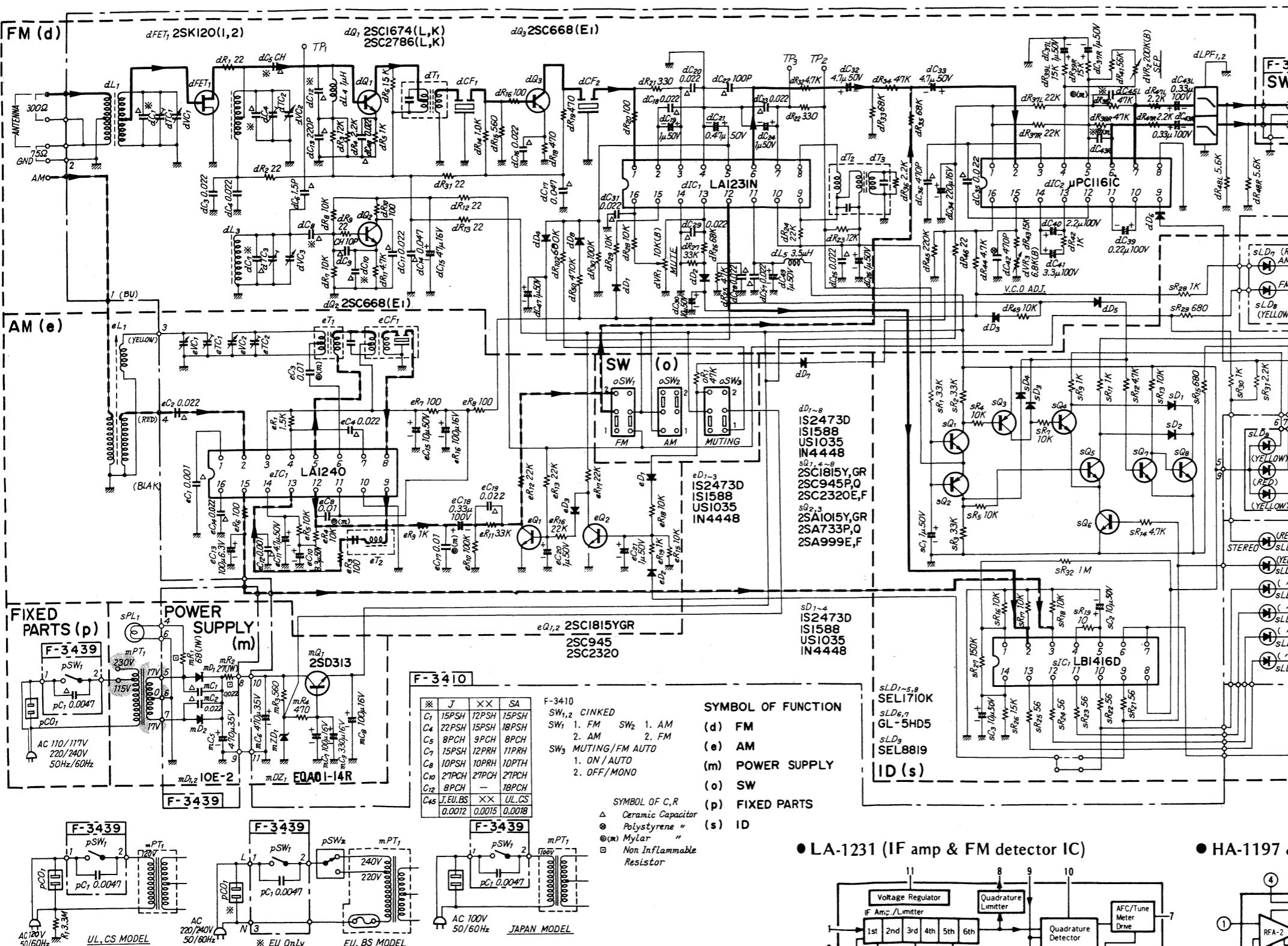
F

G

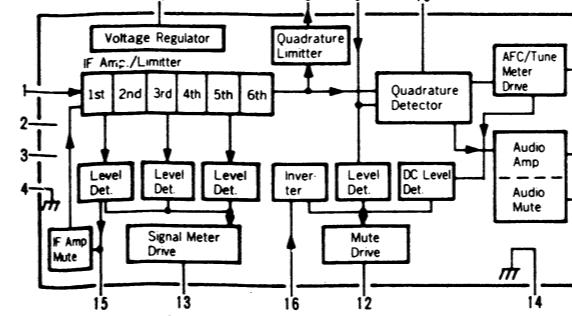
H

6-2. T-5

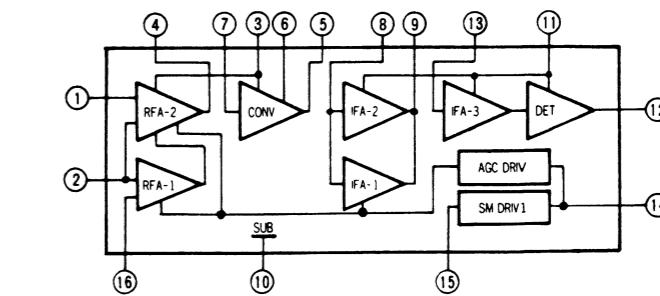
* La présentation et les spécifications sont susceptibles d'être modifiées sans préavis par suites d'améliorations éventuelles.
 * Änderungen, die dem technischen Fortschritt dienen, bleiben vorbehalten.
 * Design and specifications subject to change without notice for improvement.



● LA-1231 (IF amp & FM detector IC)



● HA-1197 & LA-1240 (AM tuner IC)



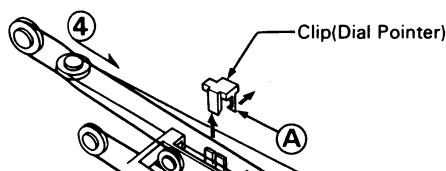
7. THREADING OF DIAL CORD

7-1. Replacement of Dial Cord

Thread the dial cord in numerical order from 1 to 12 as Fig. 7-1.
Close the variable capacitor completely.

* Dial Cord (0.5 mm ϕ) <Stock No. 60360500>

A) T-7



7-2. Attachment of Dial Pointer

1. Close the variable capacitor completely.
2. Set the dial pointer to the start-point as Figs. 7-2, 7-4.
- Confirm that the dial pointer runs smoothly on the dial scale by turning the tuning shaft.
- Move the position A of the clip pushing the dial thread in the arrow direction and then pull it upward to remove the clip.

* Clip (Dial Pointer) <Stock No. 07654600>

Fig. 7-1

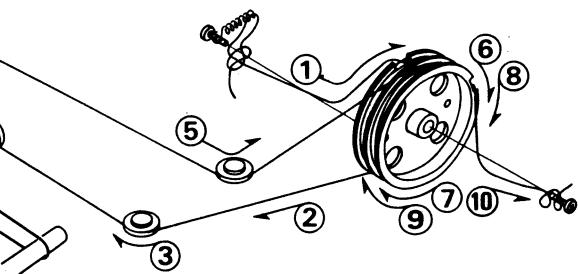
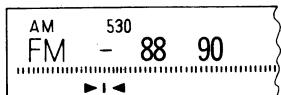


Fig. 7-2



B) T-5

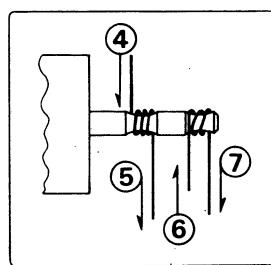
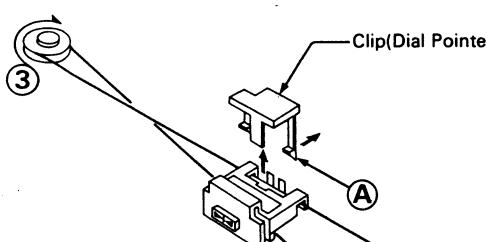


Fig. 7-3

Fig. 7-4

